Nursery Learning and Progression Steps for Mathematics

What are Learning and Progression Steps (LAPS)?

The Learning and Progression Steps are designed to scaffold the learning required in order to support children in developing a secure understanding of early mathematics. Examples in the Lancashire Key Learning for Mathematics document have been broken down into smaller steps to support teachers in planning appropriate learning opportunities. These key pieces of learning will support pupils in becoming fluent in the knowledge and skills of mathematics and ensure that the learning is effective and sustained.

The number of steps is dependent on the learning, and children will achieve these at different times.

The final step in the progression for each strand of learning is the end of stage example from Development Matters.

The steps are **not** of equal size and different amounts of time may be required for children to move between individual steps.

Some learning within the same end of year expectation has been split and designed to run concurrently alongside each other. For example,

Some LAPS may need to be completed before another can be started.

Count up to 5 objects, **moving** each as they are counted	Understand the concept of addition as combining sets of objects	Know that one more is found by adding one object to an existing group of objects	Recognise that one more is the next number in the counting sequence (when counting in ones)	***In real life contexts find one more and one less than a given number***
Count up to 5 objects, **moving** each as they are counted	Understand the concept of subtraction as removing one amount from within another	Know that one fewer (one less) is found by removing / taking away one object from an existing group	Describe the number that is one fewer (one less) than one as zero and show this practically	

Where have they come from?

The Learning and Progression Steps (LAPS) have been derived from the Lancashire Key Learning in Mathematics examples, identified from Development Matters, the Early Learning Goals for Mathematics and other sources including (but not limited to) Birth to Five Matters and Learning Trajectories.

How are they different from the Key Learning Examples?

The Learning and Progression Steps (LAPS) are smaller, progressive steps which support learning towards the Key Learning in Mathematics expectations.

How might Learning and Progression Steps (LAPS) in Mathematics be useful?

Learning and Progression Steps (LAPS) may be used in a number of ways. When planning, it may be appropriate to use LAPS examples to inform the next steps for individuals or groups. Learning and Progression Steps (LAPS) in Mathematics should be selected according to the learning needs of the individual or group. Emphasis however, should always be on developing breadth and depth of learning to ensure skills, knowledge and understanding are sufficiently embedded before moving on.
The LAPS should **not** be used as an assessment tool, but they can inform teachers about children's progress towards the end of stage expectations at the end of each term.

Key Learning in Mathematics – Nursery

Number – counting

Rote counting

- Take part in finger rhymes with numbers (birth to 3)
- *Rote count from 1 to 5 (3 & 4 year olds)*
- Recite numbers past 5 (3 & 4 year olds)
- *Rote count back from 5 to 1 or 0 (3 & 4 year olds)*

Counting objects

- Counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence (birth to 3)
- *Understand that counting is to find out how many (birth to 3)*
- Say one number for each item in order: 1, 2, 3, 4, 5 (3 & 4 year olds)
- Know the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle') (3 & 4 year olds)
- Count in everyday contexts, sometimes skipping numbers – '1-2-3-5' (birth to 3)
- Count reliably up to 5 in everyday contexts (3 & 4 year olds)
- Show 'finger numbers' up to 5 (3 & 4 year olds)
- *Understand and use conservation of number (3 & 4 year olds)*
- *Use the word 'zero' to represent 'none' (3 & 4 year olds)*
- Compare amounts, saying 'lots', 'more' or 'same' (birth to 3)
- Compare quantities using language: 'more than', 'fewer than' (3 & 4 year olds)
- Fast recognition of up to 3 objects, without having to count them individually (subitising) (3 & 4 year olds)
- Solve real world mathematical problems with numbers up to 5 (3 & 4 year olds)

Number – number sense

- *Know that numbers greater than 1 can be made in different ways (3 & 4 year olds)*
- *Practically partition a number up to 5 into two parts, identifying the amount in each part (3 & 4 year olds)*

Number – number recognition

- *Recognise and identify numerals 0 to 5 (3 & 4 year olds)*
- Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5 (3 & 4 year olds)

Number – graphics

- Experiment with their own symbols and marks as well as numerals (3 & 4 year olds)
- *Represent and explain their thinking in their own ways (birth to 3)*

Number – calculating

- React to changes of amount in a group of up to three items (birth to 3)
- *Use concrete equipment to find one more and one less than a given number up to 5 (3 & 4 year olds)*

Measurement

Distance

- *Describe and* compare sizes using gesture and language – 'bigger/little/smaller', 'high/low', 'tall', (birth to 3)
- Make comparisons between objects relating to size, length *and height e.g. longer / shorter; wider / narrower; taller / shorter* (3 & 4 year olds)
- *Find an object of similar length/width/height (3 & 4 year olds)*

Weight

- *Describe and* compare weights using gesture and language – 'heavy' (birth to 3)
- Make comparisons between objects relating to weight *e.g. heavier/lighter* (3 & 4 year olds)

Volume/capacity

- *Use language of full and empty to describe the amount in different containers (birth to 3)*
- Make comparisons between objects relating to capacity *e.g. more/less* (3 & 4 year olds)

Money

- *Understand that we need to pay for goods (3 & 4 year olds)*
- *Talk about things they want to spend their money on (3 & 4 year olds)*
- *Talk about different ways we can pay for things (3 & 4 year olds)*
- *Recognise that there are different coins and notes (3 & 4 year olds)*

Time

- *Talk about significant times of the day, e.g. home time, lunch time, snack time, bed time, etc. (birth to 3)*
- *Understand and use language – before, after, yesterday, today, tomorrow (3 & 4 year olds)*
- Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then…' (3 & 4 year olds)
- *Know some names of the days of the week (3 & 4 year olds)*

Shape

- Combine objects like stacking blocks and cups (birth to 3)
- Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round' (3 & 4 year olds)
- *Know that shapes can appear in different ways and be different sizes (3 & 4 year olds)*
- Build with a range of resources (birth to 3)
- Complete inset puzzles (birth to 3)
- Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. (3 & 4 year olds)
- Combine shapes to make new ones – an arch, a bigger triangle etc. (3 & 4 year olds)

Statistics

- *Sort objects and say what features they have in common (3 & 4 year olds)*

Space

- Put objects inside others and take them out again (birth to 3)
- Climb and squeezing selves into different types of spaces (birth to 3)
- Understand position through words alone – for example, "The bag is under the table," – with no pointing (3 & 4 year olds)
- Describe a familiar route (3 & 4 year olds)
- Discuss routes and locations, using words like 'in front of' and 'behind' (3 & 4 year olds)
- Notice patterns and arrange things in patterns (birth to 3)
- Talk about and identifies the patterns around them. For example, stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', blobs' etc. (3 & 4 year olds)
- Extend and create ABAB patterns – stick, leaf, stick, leaf (3 & 4 year olds)
- Notice and correct an error in a repeating pattern (3 & 4 year olds)

EYFS Learning and Progression Steps for Mathematics

Number - Counting

Birth to 3					3 and 4 year olds				
Learning and Progression Examples				Key Learning	Learning and Progression Examples				Key Learning
Distinguish between quantities, recognising when a group of objects is more than one	Show awareness of one-to-one correspondence through practical everyday experience			**Counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence**	Rote count from 1 to 5	Know the number names in order and distinguish each one	Understand that each object in the set requires a different number name	Synchronise the counting sequence with touching each object (one number name per object)	**Say one number for each item in order: 1, 2, 3, 4, 5**
Join in with number rhymes	Know that some of the words in number rhymes are numbers			**Take part in finger rhymes with numbers**	Count the number of fingers on one hand	Know that each hand has 5 fingers	Count and show the correct number of fingers for numbers up to 5		**Show 'finger numbers' up to 5**
There are no steps towards this expectation. Children need to be provided with situations in which finding a quantity is a meaningful task, e.g. There are only six people allowed at the painting table, how many are there now? At this stage, the children are not expected to answer this question but recognise that counting can help us find the answer.				***Understand that counting is to find out how many***	Use one to one correspondence when counting		Count up to 5 objects emphasising the last number said *(if children understand this concept with numbers up to 5 they will be able to use it with greater numbers)*		**Know the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle)**
Join in with number rhymes	Know that some of the words in number rhymes are numbers	Recognise and say numbers of personal significance		**Count in everyday contexts, sometimes skipping numbers – '1-2-3-5'**	Join in with rote counting from 1 to 5		Rote count from 1 to 5		**Recite numbers past 5**
									Rote count from 1 to 5
					Rote count from 1 to 5	Join in with rote counting back from 5 to 0	Rote count from 5 to 0		***Rote count back from 5 to 1 or 0***
Rote count from 1 to 3	Show awareness of one-to-one correspondence through practical everyday experience				Count up to 3 items, moving or touching them, in everyday contexts	Count up to 5 objects, moving or touching them, emphasising the last number said	Count up to 5 pictures, touching or marking as they are counted	Count up to 5 actions	**Count reliably up to 5 in everyday contexts**
Know that number names describe quantities (how many)	Recognise when there is one item	Recognise when there is more than one item	Recognise when there are two items without counting	**No equivalent birth to 3 example**	Recognise familiar arrangements for numbers up to 5 when on a dice or domino	Identify quantities of objects up to 5 when placed in a dice or domino arrangement	Identify quantities of objects from 1 to 3 when arranged randomly		**Fast recognition of up to 3 objects, without having to count them individually (subitising)**
Compare two groups of the same object by matching objects together	Use the word 'more' to indicate the greater amount	Identify when groups of the same object have the same amount after objects have been matched		**Compare amounts, saying 'lots', 'more' or 'same'**	Understand the last number said is the number in the set	Understand that objects can be counted in any order and the amount will be the same	Know that objects in a group can be rearranged without affecting the total		***Understand and use conservation of number***
					Use the words 'same' and 'equal' to indicate equivalence	Understand the relationship between 'more' and 'fewer', e.g. 4 is more than 3 so 3 is fewer than 4	Compare groups by counting the objects	Know that bigger objects do not indicate greater amounts, e.g. 2 footballs is a lesser amount than 4 tennis balls	**Compare quantities using language: 'more than', 'fewer than'**